

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing Of Claims:

1.-11. (Cancelled)

12. (New) An electric circuit arrangement for controlling a solenoid-operated fluid valve, comprising:

a solenoid coil;

connecting lines; and

an amplifier circuit including an input stage and an output stage, the amplifier converting a voltage supplied to the input stage into a current of a corresponding magnitude, the current flowing from the output stage via the connecting lines to the solenoid coil;

a monitoring circuit including a current-measuring device for the current, wherein:

the monitoring circuit is supplied with a setpoint voltage determining a magnitude of the current,

the monitoring circuit continuously reduces the voltage supplied to the input stage starting from the setpoint voltage if a time average of the current has exceeded an upper threshold value,

the monitoring circuit interrupts a connecting line leading to the solenoid coil if the time average has not fallen again below the upper threshold value after a specifiable time, and

the monitoring circuit increases the voltage supplied to the input stage again to the setpoint voltage after the time average of the current has fallen below the upper threshold value.

13. (New) The electric circuit arrangement as recited in Claim 12, further comprising:

a first comparator that compares the time average of the output signal of the current-measuring device to an upper threshold value, wherein:

the first comparator includes an integration element connected thereto in an outgoing circuit, an output voltage of which is limitable in such a way that it does not exceed an upper value,

the output voltage of the integration element decreases for as long as the time average of the current exceeds the upper threshold value, and

the output voltage of the integration element increases for as long as the time average of the current is less than the upper threshold value,

the output voltage of the integration element and the setpoint voltage are supplied to a minimum value selection element, and

the smaller of the two voltages of the input stage is supplied to the amplifier circuit.

14. (New) The circuit arrangement as recited in Claim 13, wherein the upper value is limitable to the output voltage of the integration element, at least equal to the maximum setpoint voltage.
15. (New) The circuit arrangement as recited in Claim 13, wherein the time average of the current is supplied to the comparator via a time-delay element.
16. (New) The circuit arrangement as recited in Claim 13, further comprising:
an absolute-value generator connected between the current-measuring device and the comparator.
17. (New) The circuit arrangement as recited in Claim 13, further comprising:
a second comparator; and
a first relay including a first switching contact, wherein:
the output voltage of the integration element and a voltage corresponding to a lower threshold value are supplied to inputs of the second comparator, and
the second comparator controls the relay, and
the switching contact interrupts a connecting line if the output voltage of the integration element has become smaller than the lower threshold value.
18. (New) The circuit arrangement as recited in Claim 17, further comprising:
a second relay including a second switching contact, wherein:
the second comparator controls the second relay, and
the second switching contact interrupts another connecting line if the output voltage of the integration element has become smaller than the lower threshold value.

19. (New) The circuit arrangement as recited in Claim 18, further comprising:
a bistable switch situated between the second comparator and one of the first relay
and the second relay, wherein:
the second comparator switches the bistable switch from a first position
into a second position if the output voltage of the integration element (35) has
become smaller than the lower threshold value, and
the bistable switch in the first position is reset by a separate reset signal.
20. (New) The circuit arrangement as recited in Claim 19, wherein the second comparator
and the bistable switch are configured as a third comparator having a self-holding
mechanism.
21. (New) The circuit arrangement as recited in Claim 17, further comprising:
an amplifier circuit for controlling two solenoid coils, the amplifier circuit
controlling one of the solenoid coils in the case of a positive setpoint voltage and another
of the solenoid coils in the case of a negative setpoint voltage;
a minimum value selection element for preserving a sign of the setpoint voltage,
selecting a smaller value in terms of absolute value, and supplying it to the amplifier
circuit as an input voltage;
a computing element for forming a sum of the voltages corresponding to the
currents flowing across the solenoid lines, wherein a sum signal corresponding to the
sum is supplied to the first comparator.
22. (New) The circuit arrangement as recited in Claim 21, further comprising:
two relays controlled by the second comparator, wherein each relay in each
instance interrupts one of the connecting lines leading to the solenoid coils if the output
voltage of the integration element has become smaller than the lower threshold value.